

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027741**Date Inspected:** 07-Jun-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/Tower**Summary of Items Observed:**

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned the QA Inspectors to the following, but not limited to the work station(s) listed, to observe the welding and the QC inspection of the following:

Joselito Lizardo-Tower 65 Meter El. (Observation of welding, QC inspection and testing of padeyes).

Will Clifford-Tower Shear Plates, ESW "S" (Performed investigative observation of back gouging, QC inspection and testing) and QA/VT & MPT verification.

Matt Daggett- OBG W13 (Observation of welding, QC inspection and testing of drop-in field splices) and Suspender Brackets (Observation of welding, QC inspection and testing of new stiffener plates).

Doug Frey-OBG E13 (Observation of production welding, repair welding, QC inspection and testing of drop-in panel field splices and structural steel members) and QA/VT & MPT verification.

Rodney Patterson-Tower ESW "E" & "P" (Observation of repair welding, QC inspection and testing) and QA/VT & MPT verification.

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NOTE: See QA daily Weld Inspection Reports (WIR) and NDE reports for additional information and details.

Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Joselito Lizardo, William Clifford, Matt Daggett, Rodney Patterson and Doug Frey monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures for compliance with the contract specifications. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift, this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and no issues was noted.

This QALI continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates). Also, this QALI performed survey and prepared update documentation of the East and West OBG.

OBG E13 Drop-In Panels (SPCM)

The QAI observed the Shielded Metal Arc Welding (SMAW) process of the structural steel floor beam field splice identified as Weld Number (WN): 13E-PP123-E2.8. The welding was performed by welding personnel, Steven Davis ID-7889 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1030, Rev. 1. The WPS was also used by the Quality Control (QC) Inspector Salvador Merino to verify the welding parameters and to monitor the welding of the Complete Joint Penetration (CJP) groove weld. The QAI observed the QC inspector verifying the welding parameters and were noted as 118 amps. The minimum preheat temperature of 40 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the vertical (3G) position with the work placed in an approximately vertical plane with the groove approximately vertical.

The QAI also observed the Shielded Metal Arc Welding (SMAW) process of the drop-in panel field splice identified as Weld Number (WN): 13E-14E-A1. The welding was performed by welding personnel, Richard Garcia ID-5982 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1040-CU, Rev. 0. The WPS was also used by the Quality Control (QC) Inspector Salvador Merino to verify the welding parameters and to monitor the welding of the Complete Joint Penetration (CJP) groove weld. The QAI observed the QC inspector verifying the welding parameters and were noted as 128 amps. The minimum preheat temperature of 40 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the overhead (4G) position with the work placed in an approximately vertical plane with the groove approximately vertical.

Later in the shift, the QAI observed the Shielded Metal Arc Welding (SMAW) process of the structural steel floor beam field splice identified as Weld Number (WN): 13E-PP123-E2.8. The welding was performed by welding

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personnel, Khit Lounechaney ID-4985 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1030, Rev. 1. The WPS was also used by the Quality Control (QC) Inspector Salvador Merino to verify the welding parameters and to monitor the welding of the Complete Joint Penetration (CJP) groove weld. The QAI observed the QC inspector verifying the welding parameters and were noted as 135 amps. The minimum preheat temperature of 40 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the flat (1G) position with the work placed in an approximately horizontal plane and the weld metal shall be deposited from the upper side.

This QAI also observed Mr. Merino perform the Magnetic Particle Testing (MPT) of the E13 drop-in panel field splice identified as WN: 13E-PP122.2. The testing was performed on the back gouge by the QC technician utilizing the MT Procedure identified as SE-MT-D1.5-CT-100 Rev.4. The QC technician performed the required test utilizing the parker contour probe in two directions (parallel and transverse to the weld axis). At the conclusion of the QC testing this QAI performed QA verification and no rejectable indication were noted. An MPT report identified as TL-6028 was generated on this date.

See digital photographs below illustrate some of the work observed during this shift.



Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Reyes, Danny

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer
